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From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

**PCT**

To:

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**NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

(PCT Rule 71.1)

Date of mailing (day/month/year)	15.10.2004
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Applicant's or agent's file reference 2002B096	<b>IMPORTANT NOTIFICATION</b>
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International application No. PCT/US 03/16947	International filing date (day/month/year) 30.05.2003	Priority date (day/month/year) 17.07.2002
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Applicant EXXONMOBIL CHEMICAL PATENTS INC.
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1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

**RECEIVED**  
OCT 25 2004

Name and mailing address of the international preliminary examining authority:



European Patent Office - P.B. 5818 Patentlaan 2  
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**ACKNOWLEDGED**  
**PATENT LEGAL ASSISTANT GROUP**  
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☒ FYI  
☐ Reminder  
☐ File

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## PCT



INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002B096	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/US 03/16947	International filing date (day/month/year) 30.05.2003	Priority date (day/month/year) 17.07.2002
International Patent Classification (IPC) or both national classification and IPC C08L23/22		
Applicant EXXONMOBIL CHEMICAL PATENTS INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

## 3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  24.12.2003	Date of completion of this report  15.10.2004
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Bergmans, K  Telephone No. +31 70 340-4189  

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/US 03/16947**

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	
	No: Claims	1-50
Inventive step (IS)	Yes: Claims	
	No: Claims	1-50
Industrial applicability (IA)	Yes: Claims	
	No: Claims	1-50

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**Novelty (Art. 33 (2) PCT)**

The relative term "substantially absent" used in claims 1 and 34 has no well-recognised meaning and leaves the reader in doubt as to the meaning of the technical feature to which it refers, thereby rendering the definition of the subject-matter of said claims unclear (Article 6 PCT). Moreover, the term "substantially absent" is unclear in view of the disclosure on page 22 line 27-32.

1. The document D1 (WO0185837) discloses a blend comprising an (97-5 wt %) isobutylene based polymer and (3-95 wt %) a semi-crystalline ethylene copolymer (plastomer). The isobutylene based polymer can be selected from e.g. butyl rubber, random copolymers of a C4-C7 isomonoolefin (claim 8). Optionally, the isobutylene based polymer is halogenated (claim 9) or star branched (page 8 line 26). The semi-crystalline ethylene copolymer (Exact 8201) disclosed in the document D1 (page 8 lines 1-6) is identical to the plastomer used in the examples disclosed in the present application. Based on this, the characteristics of the plastomer (e.g. melt index) in the present application are therefor filled. The blend contains further fillers like curatives (sulfur), carbon black (claim 16) and processing oils (5 or 10 phr) like e.g. isobutylene oil (page 10 lines 13-24). The blend can optionally contain a secondary rubber (page 11 lines 21-22). The subject matter of claims 1-30, 32-48, 50 over D1 is considered to be not novel (Art. 33(2) PCT), since the applicant did not show by appropriate comparison tests that for the blend characteristics differences do exist with respect to brittleness, hardness, air permeability and adhesion.

2. The document D2 (US5157081) discloses a composition comprising a (10-90 wt %) primary elastomer, a (10-90 wt %) second elastomer, and (10-90 wt % based on the elastomers) a crystalline polyolefin (claims 1, 5, 7, 9). The primary elastomer is selected from (halogenated) butyl rubber (copolymer of an isoolefin and a multi olefin), the second elastomer is e.g. ethylene-propylene-diene rubber (claim 1). The crystalline polyolefin is e.g. linear low density polyethylene with a density between 0.91-0.94 (Column 6 line 61). The blend further comprises fillers like curatives (sulfur), carbon black and processing oils (Column 7 line 35 and Column 8 line 19).

The subject matter of claims 1,6-22 over D2 is considered to be not novel (Art. 33(2) PCT), since the applicant did not show by appropriate comparison tests that for the blend characteristics differences do exist with respect to brittleness, hardness, air permeability and adhesion.

3. The document D3 (WO0232992) discloses an elastomeric composition comprising a (50-100 phr) (halogenated) butyl rubber or (halogenated) star branched butyl rubber and (1-50 phr) a secondary rubber (e.g. semi-crystalline ethylene copolymer). The butyl rubber can be a random copolymers of a C4-C7 isomonoolefin (page 4 line 1). The secondary rubber, being a semi-crystalline ethylene copolymer, is disclosed in the document D3 by reference to US09/569363 (WO0185837=D1) on page 8 line 17, and is identical to the plastomer used in the examples disclosed in the present application (see document D1). Based on this, the characteristics of the plastomer (e.g. melt index) in the present application are therefor filled. The blend further comprises fillers like curatives (sulfur), carbon black (10-150 phr) and processing oils (2 or 30 phr) like polybutene oil (page 10 line 1). The polybutene oil used in the document D3 is identical to the polybutene oil used in the present application (Parapol 1300). The subject matter of claims 1-11,14-34,37-50 over D3 is considered to be not novel (Art. 33(2) PCT), since the applicant did not show by appropriate comparison tests that for the blend characteristics differences do exist with respect to brittleness, hardness, air permeability and adhesion.

### **Inventive step (Art. 33(3) PCT)**

All the technical features of the present claims are described in documents D1 and D3. Moreover, documents D1 and D3 relates to an alternative elastomeric composition comprising one or two rubber, a plastomer and a polybutene oil. Therefore the claims 1-50 do not involve an inventive step (Art. 33(3) PCT).

### **Re Item VII**

#### **Certain defects in the international application**

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in document D2 is not mentioned in the description, nor is this document identified therein.

The specification for an international application should be capable of being understood without reference to any other document (cf PCT Guidelines Ch. II 4.17). The expression "hereby incorporated by reference" found in the description are therefore not according to the PCT requirements. The specification for an international application should be capable of being understood without reference to any other document (cf PCT Guidelines Ch. II 4.17). The expression "hereby incorporated by reference" found in the description are therefore not according to the PCT requirements.

**Re Item VIII**

**Certain observations on the international application**

**Clarity (Art. 6 PCT)**

1. Although the claims 1, 24 and 48 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection. This clarity objection applies also for claims 23, 47 and 50.

2. The characteristics of the composition disclosed in claims 5, 19, 20-22, 28, 42-46 and 48 are vague and unclear and leave the reader in doubt as to the meaning of the technical features to which they refer, thereby rendering the definition of the subject-matter of said claims unclear (Article 6 PCT). The standard methods used for measuring these characteristics are not disclosed in the claims.